To: Riddle, Diane@Waterboards[Diane.Riddle@waterboards.ca.gov];
Mark.Gowdy@waterboards.ca.gov[Mark.Gowdy@waterboards.ca.gov];
lindsay.larry@waterboards.ca.gov[lindsay.larry@waterboards.ca.gov]
From: Foresman, Erin
Sent: Thur 6/27/2013 4:58:28 PM
Subject: FW: information to inform WQCP update Phase I & II ?

Erin Foresman

USEPA Region 9

C/O NMFS 650 Capitol Mall

Sacramento, CA 95814

916-930-3722

Schedule: M 7:30a - 4:00p; T - F 7:30a - 2:00p

From: Foresman, Erin
Sent: Wednesday, June 05, 2013 4:40 PM
To: 'Niiya, Karen@Waterboards'; 'Satkowski, Rich@Waterboards'; 'Riddle, Diane@Waterboards';
'Mark.Gowdy@waterboards.ca.gov'
Cc: Cabrera-Stagno, Valentina; Vendlinski, Tim
Subject: information to inform WQCP update Phase I & II ?

Hi Karen, Rich, Mark, and Diane

It was nice to see most of you on Monday. Valentina and I mentioned a few ideas we have for
information that may be helpful in the Phase I and II updates. I summarize them below. We
have some funding that we'd like to use to do these projects.

We are interested in your feedback on these ideas if you can you review them and let us know if

they are something that would be helpful information for your work. If they are worthwhile and helpful to you, we would like to include you as we move forward. Karen mentioned she had some concerns about the trawl data, the X2 calculation, and vertical estimates. We can talk about all of these and find ways to address them if you are interested in this work being completed.

SalSim Model Runs (useful for Phase I)

• Estimate population response from the SED alternatives 20, 40, and 60% and we are interested in 50% UF to compare fish population out comes.

• Estimate population response and flows necessary to meet EPA Temperature Guidance Criteria (these are year-round criteria) and estimate fish population response.

• Estimate population response and flows necessary to optimize EPA Temperature Guidance Criteria and other uses so that temperature criteria are met most of the time.

Visualize relationship between salinity gradient and abundance and distribution of 8 fishes (useful for Phase II)

Create estuary salinity gradient maps using 3-D models and plot the abundance and distribution of 8 fish species on top of salinity gradients. These maps would be similar to ones you have seen before but they would plot the entire salinity distribution (not just the LSZ) and they would visualize the relationship between abundance and distribution and the salinity gradient.

This idea includes creating a master ESRI ArcMap MXD files that include a basemap, map symbology, and layout that we approve. This master MXD file will establish the ability to plot abundance and distribution data for eight fish species on top of salinity distributions that correspond to the sampling events. The MXD files should be linked to the sampling and salinity distribution data files and the sampling and salinity distribution data files should be transmitted with the final MXD files.

- Fish species and monitoring programs

o SF Bay Study http://www.dfg.ca.gov/delta/projects.asp?ProjectID=BAYSTUDY

1. Bay Shrimp

2. Pacific Herring

3. Starry Flounder

o Fall Midwater Trawl http://www.dfg.ca.gov/delta/projects.asp?ProjectID=FMWT

1. Delta Smelt

2. Longfin Smelt

3. Sacramento Splittail

4. American Shad

5. Striped Bass

o Spring Kodiak Trawl http://www.dfg.ca.gov/delta/projects.asp?ProjectID=SKT

1. Delta Smelt

- Salinity Distribution -- Import monthly-averaged, depth-averaged salinity distributions from UNTRIM into ArcMap (NOTE we could use instead the daily-averaged depth-averaged model outputs for one of the sampling days. Not sure which would be better)

- Create a master MXD file with a basemap, map symbology, and layout that we approve. Establish the ability to plot fish sampling data on top of monthly salinity distribution data in the data view. Organize the data by the year, and then by the month. Fish sampling data can be shown using "bubbles" in discrete size categories (large bubbles = more fish, smaller bubbles = fewer fish) defined in the legend. Salinity data can be shown using a color gradient and legend.

- This process should result in an MXD file that allows us to visualize more than 20 years of salinity distribution and fish abundance and distribution data and create print quality and web quality maps.

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